

NPDES Exploration Facilities GP Discharges – Burger J

Type of Waste NPDES GP Discharge	Composition	Projected Season Volume ¹	Projected Rate	Treatment Process/Disposal Practice
D001 ² Water-Based Drilling Fluids and Drill Cuttings	Fluids and cuttings	Cuttings – 915 bbl Fluids – 5,546 bbl Total while drilling – 6,461 bbl Reserve pit fluid volume – 2,427 bbl Total with reserve – 8,888 bbl	72 bbl/hr. while drilling; 1000 bbl/hr. for reserve pit volume	<i>Discoverer</i> – discharged to the ocean approximately 26 ft (8 m) below the waterline <i>Polar Pioneer</i> - discharged to the ocean approximately 20 ft (6 m) below the waterline
D002 Deck Drainage	Uncontaminated fresh or seawater	<i>Discoverer</i> – 3,960 bbl	<i>Discoverer</i> – 33 bbl/day	<i>Discoverer</i> - uncontaminated water discharged at approximately 15 ft (4.5m) below the waterline; contaminated water is treated in an oil-water separator (OWS); oily water stored aboard, transported by boat to approved treatment/disposal/storage (TDS) site
		<i>Polar Pioneer</i> – 8,400 bbl	<i>Polar Pioneer</i> – 70 bbl/day	<i>Polar Pioneer</i> - uncontaminated water discharged to the ocean approximately 60 ft (18 m) below the waterline; contaminated water is treated in an OWS; oily water stored aboard, transported by boat to approved TDS site
D003 Sanitary Wastes	Black water	<i>Discoverer</i> – 3,540 bbl	<i>Discoverer</i> – 29.5 bbl/day discharge (based on 124 persons; 10 gallons [gal]/person/day)	<i>Discoverer</i> - Discharged at a depth of 12 ft (4m) below the waterline after treatment in a marine sanitation device. <i>Polar Pioneer</i> - discharged approximately 75 ft (23 m) below the waterline
		<i>Polar Pioneer</i> – 1,716 bbl	<i>Polar Pioneer</i> – 14.3 bbl/day (based on 114 persons; 5.3 gal/person/day)	
D004 Domestic Wastes	Gray water (laundry, galley, lavatory)	<i>Discoverer</i> – 35,400 bbl	<i>Discoverer</i> – 295 bbl/day discharge (based on 124 persons)	<i>Discoverer</i> - Discharged at the waterline <i>Polar Pioneer</i> - discharged

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		<i>Polar Pioneer</i> – 32,520 bbl	<i>Polar Pioneer</i> – 271 bbl/day (based on 114 persons)	approximately 75 ft (23 m) below the waterline
D005 Desalination Unit Wastes	Rejected water from watermaker unit	<i>Discoverer</i> – 209,040 bbl	<i>Discoverer</i> - 1,742 bbl/day	<i>Discoverer</i> - Discharged at the waterline
		<i>Polar Pioneer</i> – 45,286 bbl	<i>Polar Pioneer</i> – 377 bbl/day	<i>Polar Pioneer</i> - discharged to the ocean approximately 60 ft (18 m) below the waterline
D006 BOP Fluid	Freshwater, concentrate and monoethylene glycol	<i>Discoverer</i> – 150 bbl (based on 3 function tests, 3 pressure test and 3 retests)	<i>Discoverer</i> - 16.6 bbl/test	<i>Discoverer</i> - Discharged to the ocean
		<i>Polar Pioneer</i> – 180 bbl (based on 3 function tests, 3 pressure test and 3 retests)	<i>Polar Pioneer</i> – 20 bbl/test	<i>Polar Pioneer</i> - Discharged to the ocean
D007 Boiler Blowdown	Water and minerals drained from boiler drums	<i>Discoverer</i> – 151 bbl	<i>Discoverer</i> - 1.3 bbl/day	<i>Discoverer</i> - Discharged approximately 8 ft (2.5m) below the waterline
		<i>Polar Pioneer</i> – 754 bbl	<i>Polar Pioneer</i> – 6 bbl/day	<i>Polar Pioneer</i> - Discharged directly overboard
D008 Fire Control System Test Water	Uncontaminated seawater	<i>Discoverer</i> – 607 bbl	<i>Discoverer</i> – 36 bbl/test (tested weekly)	<i>Discoverer</i> - Discharged directly overboard
		<i>Polar Pioneer</i> – 607 bbl	<i>Polar Pioneer</i> – 36 bbl/test (tested monthly)	<i>Polar Pioneer</i> - Discharged directly overboard
D009 Non-contact cooling water	Uncontaminated seawater	<i>Discoverer</i> – Range of 6,624,000 – 12,877,680 bbl	<i>Discoverer</i> – 107,314 bbl/day discharge while drilling; 55,200 bbl/day discharge while not drilling	<i>Discoverer</i> - Discharged to ocean waters at several sites above and below the waterline
		<i>Polar Pioneer</i> – 2,566,240 bbl	<i>Polar Pioneer</i> – 21,385 bbl/day	<i>Polar Pioneer</i> - Discharged to ocean at two locations: one approximately 20 ft (6m) and one approximately 60 ft (18 m) below the waterline
D010 Uncontaminated	Uncontaminated seawater	<i>Discoverer</i> – 37,915 bbl	<i>Discoverer</i> – variable	<i>Discoverer</i> - Discharged at the waterline

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ballast water		<i>Polar Pioneer</i> – 171,935 bbl	<i>Polar Pioneer</i> – 719 bbl/day plus 85,655 bbl when the drilling unit is moved	<i>Polar Pioneer</i> - discharged to the ocean approximately 60 ft (18 m) below the waterline
D011 Bilge water	Seawater that collects in internal parts of the drilling vessel hull	<i>Discoverer</i> – 90,514 bbl	<i>Discoverer</i> – 754 bbl/day	<i>Discoverer</i> - Treated in OWS, uncontaminated water discharged at the waterline, oily water stored aboard, transported by boat to approved TDS site <i>Polar Pioneer</i> - discharged to the ocean approximately 60 ft (18 m) below the waterline; oily water stored aboard, transported by boat to approved TDS site
		<i>Polar Pioneer</i> – 85,714 bbl	<i>Polar Pioneer</i> - 714 bbl/day	
D012 Excess cement slurry	Rinsate from cement tank	<i>Discoverer</i> – 45 bbl	5 bbl/casing string and when setting plugs	<i>Discoverer</i> - Discharged just below the waterline
		<i>Polar Pioneer</i> – 45 bbl	5 bbl/casing string and when setting plugs	<i>Polar Pioneer</i> – discharged to the water surface
D013 ^{3,4} Mud, cuttings, cement at the seafloor	Mud, cuttings, and cement	MLC Cuttings – 3,703 bbl; 36-in and 26-in Sections Cuttings – 1,303 bbl; Fluids – 3,207 bbl; Cement – 45 bbl; Total while drilling using MLC bit – 8,341 bbl	79 bbl/hr. while drilling	<i>Discoverer</i> - Discharged at the ocean floor <i>Polar Pioneer</i> – Discharged at the ocean floor.
		MLC cuttings only if using the MLC ROV system ⁵ – 27,197 bbl	162 bbl/hr.	

¹ Based on an assumed drilling season of approximately 120 days

² Estimated time to drill these bottomhole sections is 90 hr. drilling time (does not include non-drilling time)

³ Estimated time to drill these tophole sections is 106 hr. drilling time (does not include non-drilling time). Reserve pit volume (2,427 bbl) is for the *Polar Pioneer*; the *Discoverer* has a reserve pit volume of 1,500 bbl. This table assumes the worse case – that the larger pit volume will be discharged. The EIA (Appendix C) also assumes the larger pit volume in its analyses.

⁴ MLC construction time using the MLC ROV system is estimated at 168 hr.

⁵ MLC ROV system cuttings volumes and rates are only for the construction of the MLC; MLC ROV system is not capable of drilling the conductor and surface casing sections